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SCHOOL POLICY VIA SCHOOL FACTS

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The recent article by Mr. William H. Allen, in the *School Review*, has shown the need for more adequate information respecting the results of educational policy. Mr. Allen finds explanation of the tardy development of educational statistics in the fact that national reports have not reduced school data to comparable bases, that the advocates of comparative statistics fail to relate their demands to personal and local needs, and that teachers have not connected adequate statistics with the proper discharge of their own duties.

In considering any subject pertaining to education, one turns naturally to the work of the National Educational Association, which for forty-seven years has watched and commented upon the trend of educational process in this country. The annual reports of this association form a history of our enlarged school system. Here we find discussion of all important steps in the development of American schools, and hither we have turned for information as to the importance ascribed to school facts by educators. After reading all articles bearing on statistics from 1858 to 1905, the following digest has been prepared:

In the index volume published in 1897 we find mention of statistical articles in the following years: 1859, 1860, 1872, 1874, 1877, 1881, 1885, 1886, 1887, 1889, 1890, 1891, 1892, and 1895. Articles have since appeared in 1897, 1899, and 1900.

At the second meeting (1859) a committee of three was appointed to confer with the secretary of the interior "to ascertain what additional statistics in relation to the subject of education are desirable and feasible to obtain by means of the approaching national census." In the report submitted a year later this committee suggested the desirability of statistical information as to modes of constructing schoolhouses and methods of organizing schools. A list of important items for school reports included: (1) cost of buildings and the num-

ber of pupils accommodated; (2) number and salaries of teachers in these buildings; (3) expense of heat; (4) repairs and incidentals. "These items," they commented, "if reliable and accompanied by proper explanations in the body of the report, will afford valuable means of comparison, and be serviceable in showing the most economical modes of constructing schoolhouses and organizing schools." Stress is laid upon the value of being able to ascertain and compare the "cost per pupil" of different districts. This led to the difficulty of obtaining a fair basis of comparison, because of the variations in terminology. In estimating the cost per pupil, a difference of 50 per cent. was produced by a variation of method in reckoning. Moved by the impossibility of comparing facts of unlike nature, the committee pleaded for uniformity, and urged that as long as differences existed reports should clearly explain their nomenclature.

Thus we find in this first report the two watchwords of modern statistical method, "comparison" and "uniformity."

In 1863 a Committee on General Statistics was appointed; the secretary was instructed to prepare for distribution, blanks covering the field of general statistics, to digest reports when returned, and to present a synopsis at the next annual meeting of the association, in 1864; nothing more was heard from this committee.

In 1872 a paper on "Educational Lessons in Statistics" was presented by Hon. John Eaton, United States commissioner of education, who emphasized all that had been said before in regard to comparison and uniformity, but added little that was new, except a plea for a legalized system of reports which would lend themselves easily to comparison. Mr. Eaton characterized the methods of educational statistics as "so diverse and incomplete that they form but the records of so many single experiences, incapable of being aggregated or contrasted with each other." In the discussion which followed there was criticism of the National Bureau of Education for failing to reduce its valuable material to comparable bases. Here and at other times it has been held that the requirement by the National Bureau of Education of statistics from each state, and the comparative publication of the same, would do much to develop a universal system.

In 1874 a Committee on Statistical Reforms submitted a report, suggesting a uniform system of collecting and tabulating of educational

facts. Blanks were prepared for furnishing statistics as to school population, age, enrolment, average and daily attendance, number of rooms, teachers and salaries, as well as items of income and expenditure. This report was adopted, and it was agreed that forms should be printed and distributed in each state, the results to be tabulated by the National Bureau of Education. How little came of this effort may be judged from the fact that in 1877 a superintendent pronounces the present statistics "almost useless at home and absolutely useless abroad as standards of comparison." He finds the causes of the lack of uniformity to be public indifference, official indifference, want of authority on the part of officials to secure proper returns, want of uniform understanding as to meaning of terms, and *an attempt to prove certain preconceived opinions*. Thirteen years later this last point was recurred to by Mr. Winship, of Boston, who said: "We throw out our banners, commit ourselves to our idea, and then pick up such and so many statistics as will enable us to make a skilful argument."

In 1881 the Department of Superintendence listened to a paper on statistics written by Superintendent Andrew McMillan, of Utica. There was nothing new in his consideration of the subject. Attention was called to the disparity of statistical methods in the following words:

With the ample provision made by the government for collecting facts connected with schools, it would seem that we have but to turn to official reports to obtain all desired information. But it is just here we are confronted by an obstacle of no small dimensions, and which, so far as I know, exists nowhere else in the wide domain of statistical research. I refer to the lack of uniformity in the methods of collecting facts and data pertaining to school work in the different states of the Union. . . . School reports are nearly useless for purposes of useful comparison.

Mr. McMillan appended a list of necessary items, which was practically the same as that of 1874. This paper and its discussion resulted in the appointment of a committee of ten on Unification of School Statistics; but there is no record of any work done by the committee.

In 1885 the subject was again approached by a consideration of school reports. A committee of three, with John D. Philbrick as chairman, made a careful study of existing city and state reports,

and, after a long dissertation on the merits of American school reports and on their reputation abroad, went on to point out their defects. The old evil was found to be obstructing the process of educational statistics—lack of uniformity, and the consequent inability to establish units of comparison. This committee made the school census the starting-point of reform. They discovered that, while the census was taken annually in many states and biennially in others, yet in certain instances the intervals were of four and even five years. Many states left the matter of the school census with those outside of the educational organization. In Massachusetts the school board was responsible for the census; in California each county had census marshals subordinate to the state superintendent of public instruction. Some states required only the names of those of school age; others asked names and ages. The term “school age” was found to have sixteen interpretations, ranging from “four to fifteen” to “six to twenty-one.” In 1881, when Springfield, Mass., and Portland, Maine, had about the same population, there was a difference of 4,000 in the school population because of the difference in school age.

Uniformity of school nomenclature was urged for the sake of future comparison. “Who,” they asked, “can unravel the meaning of the word ‘district’ as used in the different states? Who, but a New Yorker, can understand the meaning of that word even in the state of New York?” California was mentioned as doing pioneer work in the matter of comparative statistics; its law has long required that school facts be arranged so as to show comparison between the results of the current year and some previous year. In closing, the committee made eighteen recommendations as to annual reports from state, county, and city, suggesting, among other things, that the legal and census school age be from four to twenty-one, obligatory from six to fourteen; that all reports begin with a statistical summary; and that certain committees be appointed to consider ways of promoting uniformity of method.

At the same meeting (in Saratoga, 1885), but in another department, a committee reported on “Reforms in Educational Statistics,” and presented a more elaborate plan of reporting the year’s work than American schools had yet known. The scheme covered “School Population,” with ten subdivisions; “Departments of Educational

Work," four subdivisions; "Teachers, Buildings, and Appliances," six subdivisions; "Finances, Including Receipts," six subdivisions; "Expenditures," six subdivisions.

In 1887 a Committee on Educational Statistics presented a report on "Points for Constant Consideration in the Statistics of Education." The text was: "The more nearly statistics approach a universal language, the better;" but nothing was added to all that had been said before. Mr. Gove of Denver, said forcibly: "Volunteer statistics, are monstrously unreliable; city statistical reports are jammed full of tables whose conclusions cannot be made use of. We need a positive authority to put questions and demand answers; a power above us to get reliable statements of facts."

In 1889 Kansas City took up the reform. Again we hear the argument for uniformity, again the value of comparative statistics, again the long list of items important for investigation; but we find, in addition, the first suggestion relating physiological and social conditions to school statistics. Said this committee:

Of average pupils little need be said; but with erratic cases many statistics might be collected which would be invaluable. If a pupil makes a poor record in a certain subject, it would be interesting, as an educational fact, to know his age, habits, how long in a public school, his teachers, how long under each one, whether he had private teachers, home influences, tendencies of his parents' minds; in short, to know the boy as he is. School statistics should enter into the social conditions of the people.

In 1890 a paper was read before the Department of Superintendence by Superintendent Harvey M. LaFollette, of Indiana, whose subject was: "School Statistics as the Basis of Legislative or Official Action: What Should Be Collected and How?" The value of relating educational facts with social conditions was emphasized again, and Mr. LaFollette took the ground that "to secure the best results in legislation, statistics of education must be taken as complementary to other social statistics, as illiteracy, crime, wealth." He speaks strongly of the value of universal statistics, but adds quickly that care must be taken not to destroy the definite character of statistics and their immediate or local application in an attempt to make them universal. The outcome of this paper was the appointment of a committee of three, with Commissioner W. T. Harris as chairman, to consider school statistics; and in 1891 Mr. Harris submitted a

scientific article on the meaning and value of statistics in general and of educational statistics in particular. He pointed out that directive power is dependent upon insight into the forces at work, and this insight is to be gained only by statistics; that this insight is of even greater value to the educators who are doing this work than to the legislators who are judging the work.

It was in this year that Mr. Blodgett, of the United States Census Bureau, sent to the association a letter in which, after stating that "no item of school statistics is now uniformly recorded throughout the country," he outlines what he considers desirable statistical information. These items do not differ widely from the schemes previously presented.

In 1892 there was a further report on "School Statistics," and a plan of reporting, far more elaborate than at any other time, was submitted to the association. This was based, however, on the same general plan as before, with a larger number of subdivisions, including a few items regarding social facts.

In 1894 Mr. W. T. Harris took for the subject of a paper read before the association, "School Statistics and Morals," in which criminal statistics were related to those of education. The next year further suggestions were made in the matter of forms for reports, and in 1899 the Department of Superintendence listened to a report on "Uniform Financial Reports."

In 1900 Superintendent Greenwood, of Kansas City, presented before the National Council of Education a report on "High-School Statistics." In this report, and one submitted the following year, Mr. Greenwood made an interesting study of the reasons why so many children leave school in the first year of high school, tabulating his results as to age of leaving and causes, number of failures by years and classes. After considering also a comparison between twenty-three cities of the average cost per pupil of maintaining high schools, two averages being taken (one based on enrolment, one on average daily attendance), the committee closed its work with several recommendations as to collecting, tabulating, and reporting information on the comparative persistence of attendance during the four years of high-school work, together with special investigation as to manual-training schools, their work and their results.

In 1903 a special investigation was made with regard to the number of children with defective sight and hearing, but there was no effort to relate the physical defect to class standing or mental ability. In 1904 there was further discussion of how this statistical investigation of eyesight and hearing should be conducted.

At the meeting recently held at Asbury Park the subject of statistics had no place on the program, but, during one of the sessions of the National Council of Education, Mr. George H. Martin, secretary of the State Board of Education of Massachusetts, complained that it is still impossible to obtain accurate school data, and pleaded for uniformity of method in recording school facts.

It is now almost half a century since statistics first claimed the attention of the National Educational Association. We have seen how much has been said and how little done to establish their use. One reason is not far to seek. While we have found superintendents talking much of uniformity, while we have heard commissioners of education lament the lack of statistics, and members of school boards advocate their use, the teachers have been silent. They have not realized that school data should be primarily of interest to the rank and file who are constantly reporting upon their work. This fact has been pointed out by the New York Association for Improving the Condition of the Poor, which has done such effective work in showing the need for school facts in solving the present problems of New York city.

It is to be hoped that the competition recently proposed by Mrs. Williamson, of New Jersey, will stimulate the interest of teachers in collecting and studying the results of their own work and that of their colleagues. When those who are doing the actual work of teaching feel that more light is the first essential to a realization of their own ideals, comparative school statistics will undoubtedly occupy a larger share of the attention of the National Educational Association.